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Title Modeling and estimation of non-linear aerodynamic coefficient dependencies for aero database update of high performance aircraft

Author/s C. Kamali , A. A. Pashilkar

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Abstract

This document describes a novel technique for modeling and estimation of non-linear aerodynamic coefficient dependencies on aircraft state and control variables. This is important from the point of view of updating the aerodynamic database of six DOF simulations post flight test. The technique is validated using the six DOF simulated data of an unstable aircraft augmented with full authority control laws and flight test data of similar class of aircraft.